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Ranby on Gunshot Wounds
Hales - on Tar Water
Sloane - on the Eyes
Frings - on Phrensy
Watson Experi: on Electricity
Franke ..... Ditto .....
Watson ..... Ditto .....

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THE METHOD OF TREATING GUNSHOT WOUNDS.

BY

JOHN RANBY,

Principal SERJEANT SURGEON to His MAJESTY, and *F. R. S.*

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TO THE

KING.

SIR,

PERMIT me, in all poſſible Humility, to approach Your Royal Preſence, not with a Panegyric on Your Great Actions, but with my Sentiments on an intereſting, tho' leſs exalted, Subject.

DEDICATION.

I AM often wont to call to mind the Battle of DETTINGEN; and the unwearied Care taken by YOUR MAJESTY of the gallant Sufferers in that ſignal Engagement: with whom YOU were pleaſed to ſhare the Toil and Dangers of That important Day. The paternal Tenderneſs, which flow'd from Your generous Breaſt on that Occaſion, makes me flatter myſelf, that a plain and eaſy Method of relieving Incidents, which unavoidably attend even victo-

victorious Arms, will prove no unacceptable Offering to YOUR MAJESTY. To me it was frequent Matter of singular Admiration to behold a Great Prince descend so far from his elevated Station, as minutely and circumstantially to inquire into the particular State and Condition of every Individual, afflicted either with Sickness, or Wounds, incurr'd in his Service.

PARDON me, SIR, if I say, the Business of the Hospital became now so conside-

rable

rable an Object of Your Thoughts, that each ſucceſſive Morning brought a Renewal of YOUR MAJESTY'S Orders concerning it: which had ſo happy an Effect, that all poſſible Eaſe and Conveniency were thereby procured to the Diſtreſſed.

SUCH was YOUR MAJESTY'S Concern for Your Troops, at a time when the World might naturally have expected to ſee Your whole Solicitude confined to the Perſon of your own Illuſtrious Off-

Offspring: who was actually labouring under the painful Fruits of a Courage, inſeparable from the high Blood, from which He deſcends. I beg leave, SIR, on this Occaſion to declare, that the Truſt, placed in me by YOUR MAJESTY, fill'd my Mind with a Pleaſure, which was never exceeded by any Thing, but the Joy I afterwards felt on his ROYAL HIGHNESS's Recovery.

SHOULD my Deſign of publiſhing the following Treatiſe,

tiſe, and the Duty herein expreſs'd, be agreeable to YOUR MAJESTY, I ſhall obtain the full Accompliſhment of my Wiſhes: it being the greateſt Ambition, that can enter my Heart, to be allowed the Honour to ſubſcribe myſelf,

May it pleaſe YOUR MAJESTY,

YOUR MAJESTY's moſt Dutiful and

Moſt Faithful Subject and Servant,

JOHN RANBY.

THE

PREFACE.

IT may not be amiſs to acquaint the Reader, that the Subſtance of the following little Piece was penn'd in a Camp; and communicated, in an Epiſtolary Correſpondence, to ſome particular Friends, before my Return to *England*. I had then no Thoughts of ever making it publick: but as ſome very worthy Gentlemen, both in Phyſick and Surgery, (One in particular, who lately retired from a long Courſe of Buſineſs) have frequently

a inſinu-

inſinuated the Uſe it might be of to the young Practitioner, I could not help being influenced by their Suggeſtions; which muſt always command from me the greateſt Deference. Accordingly I collected my ſcatter'd Papers; fell to modelling the reſpective Materials; and ſoon brought them into the Form, in which they now appear. I have declined drawing Quotations from the ſeveral Authors, who have wrote on this Subject: not thro' an arrogant Self-Sufficiency, and a Preſumption, that there is Nothing in them worthy of being cited; but purely, as a Method of that nature would carry me beyond the

Bounds I had fix'd to myſelf; and at the ſame time be of no great Moment, in regard to my preſent Deſign: which is, to recommend plentiful Bleeding very early in theſe Gunſhot Wounds; light, eaſy, Dreſſings; and, above all, to introduce the ſignal Uſe of the Bark.

THESE are the Motives that induce me to appear thus in Print, to which may be added one not leſs material: That, I mean, of inciting Others, of more conſiderable Abilities, to give a Detail of their correct Sentiments, and ſucceſsful Practice, in this Point. As there are Some amongſt us, who have

made ſeveral Campaigns, and kept, no doubt, exact Journals of their Chirurgical Proceedings in that Situation; 'tis a Juſtice, in my Opinion, which they owe to the World, to exerciſe their ſuperior Talents, and leave recorded to Poſterity What will convey eminent Benefit to Mankind.

As I have, in ſeveral Places of this Eſſay, taken particular Notice of certain Chirurgical Inſtruments; I here lay before the Publick an exact Liſt of Thoſe aſſign'd to every Surgeon, ſerving in their reſpective Capacities in the Army.

A Screw-Saw with two Blades.
A Knife and Catlin.
An Artery Forceps.
Two Cauteries.
Four Chiſſels, large, and of different Figures.
A Trephine, with two Heads and a Key.
A *Perforatory.*
A *Lenticular* and *Raſpatory.*
A Caſe of crooked Needles.
A large, and ſmall, Catheter.
Crooked Sciſſors.
Two *Whalebone Probes,* } *Thirteen or fourteen Inches long.*
A *Steel Probe,* }
A Speculum Oris.
A Plaiſter Knife.

A Trocar.
Paces.
A Bruſh for the Trephine.
A Bar Inſtrument with two Claws.
Bullet Forceps, twelve Inches long, with four ſharp Teeth.
Ditto, ſtrait, without Teeth.
A Levatory.
A Screw Tournequet.
A Caſe of Pocket Inſtruments.
A Caſe of Lancets.

THE Hoſpitals are not only furniſh'd with theſe; but, thro' an abundance of Care and Tenderneſs for the Patients, ſupplied likewiſe with ſeveral very curious additional ones;

ones; viz. *Three Pair of ſtrong cutting Pincers*, &c.

Now tho' I am naturally averſe to cenſuring any particular Perſon's Manner of treating Caſes in Surgery; I can't avoid remarking this one Thing in reſpect of the extraordinary Implements, which make a Part of the above Liſt: namely, I cannot conceive the Neceſſity of arming young Men with ſuch a Number of Inſtruments; and particularly with ſuch an unconſcionable, unmerciful, Length of Probe and Forceps. However, I am the eaſier on this head, as I flatter myſelf

ſelf they will ſeldom or never be made Uſe of.

I CANNOT put an End to this Preface, without making my due Acknowledgments to ſome few of my moſt intimate Acquaintance, endued no leſs with the Social Virtues, than diſtinguiſh'd in their Medical Capacity; to whoſe Care and Superintendency in reviſing theſe Sheets, as they came from the Preſs, I am greatly indebted.

THE

THE METHOD OF TREATING GUNSHOT WOUNDS.

THE indiſpenſible Obligation I was under to attend the King laſt Year to *Germany*, naturally led me to revolve in my Mind whatever Practice I had been converſant with in regard to Gunſhot Wounds: and put me on turning over the ſeveral Authors, who had wrote on that Subject. From the Peruſal of Theſe, and the

Recollection of my own Experience in the Affair, I ſet out, as I thought, not altogether unqualified, for the Army: where I was neceſſarily ſupplied with an Opportunity of being intimately acquainted with the Nature of Gunſhot Wounds. The Laurels, gain'd by the Troops that Campaign, were not gather'd without much Toil and Bloodſhed: and had I been furniſh'd with as many Hands, as the Poets record of *Gyas*, they might all have been very well employ'd in the Service of the Wounded.

THE following Pages make not their Appearance in the World, thro' any little Incentive to Vain-glory, or impotent Deſire of erecting a

Monument of Fame on ſo minute and diſproportion'd a Baſis: The Aim and Scope I propoſe to myſelf in it being only to do That, which every Man of Probity, or Humanity, would look upon as inſeparable from his Duty: namely, to contribute all that lies in my Power to the Eaſe, Relief, and Safety of my Fellow-Creatures; eſpecially of thoſe brave Men, who, prompted by a native Virtue and Valour, are at this Time glorioufly embark'd in vindicating the Honour of their Country, and the Liberties of *Europe*: and who, in that arduous Struggle, muſt, in the natural Courſe of Things, ſooner or later, be expoſed to thoſe Caſualties, which 'tis the Deſign of this little Eſſay to remedy.

I SHALL purpoſely avoid entering into any Hypotheſes; nor ſhall I concern myſelf in canvaſſing the Opinions, either of my Predeceſſors, or Contemporaries, in Surgery: contenting myſelf with the bare Recital of my own Practice. Which Task I ſhall take upon me to perform with all imaginable Candour, Veracity, and Integrity. So that the young Practitioner (and I put not Pen to Paper for the more advanced in the Profeſſion) will find, in treating Gunſhot Wounds, a plain and ſuccinct Method sketch'd out to him, that ſeems not only entirely agreeable to Reaſon, but is confirm'd over and above by inconteſtable Experience, and evinced by a con-

a conſtant, uninterrupted, Series of Succeſs, where there was the leaſt Room to hope for it.

No Surgeon, who is tolerably verſed in the Buſineſs of his Calling, can fail of entertaining a juſt and adequate Idea of the Nature of Gunſhot Wounds; and conſequently can never be any ways at a Loſs in regard of the Management of them. And yet, either for want of a due Attention to the Matter in hand, or thro' a great Unwillingneſs to depart from a Path, which their Chirurgical Forefathers generally trod in, they too frequently decline exerting their own reſpective Faculties; and acquieſce in a Method, which, thro' a Sanction acquired

quired by Antiquity, ſtands as ſacred and inviolable: how little ſoever there may be of Reaſon and Experience to ratify and ſupport it.

THE firſt Intention, in regard of Accidents, cauſed by a Musket or Piſtol Ball, is, if poſſible, to extract the Ball, or any other extraneous Body, that may be lodged in the wounded Part. And whenever theſe Caſualties are attended with a great Effuſion of Blood, from the Rupture of ſome conſiderable *Arterial* Veſſel, it will be abſolutely neceſſary, with all imaginable Diſpatch, to reſtrain the Bleeding, by taking up the Artery with the Needle: and, at the ſame time, to be particularly careful, that your Hold

Hold prove no ways eluſive. There is no depending on any Applications, however ſtyptic, on theſe Occaſions.

IN order to get at the Ball, or any other foreign Matter, that infeſts the Wound, I would adviſe Probing, or Poking, to be uſed as ſparingly as poſſible: having conſtantly experienced, thro' the whole Courſe of my Attendance in theſe Caſes, that ſuch a Conduct is highly detrimental to the Patient. And, indeed, where Probing is neceſſary, I would always prefer the Finger, as the beſt and trueſt Probe.

IF a Ball, or any other foreign Body, happens to be lodged near the

the Orifice, or is perceptible by the Finger to lie under the Skin, tho' at ſome Diſtance from the Mouth of the Wound; in the firſt Caſe 'tis requiſite immediately to remove ſuch extraneous Matter: and, on the other Occaſion, to cut upon it, and take it out. But, when it is ſunk deep, and lies abſolutely beyond the Reach of the Finger, I could never bring myſelf to thruſt thoſe long Forceps the Lord knows where, with ſcarce any Probability of Succeſs.

A GREAT Number of Inſtances have occurr'd to me, where Balls have been quietly lodged in the Body; till, after many Years, they have work'd themſelves a Paſſage towards

towards the Surface, and were conſequently very eaſily extracted; and ſeveral very lately, where Balls have been left behind: three particularly, wherein the ordinary Surgeons were concern'd. One of the Wounded was a Foreigner of very great Diſtinction; another a Commanding Officer, of ſingular Honour and Humanity, in our own Army. The firſt received a Shot in the Breaſt from a Musket; the other was wounded in the upper Part of the Thigh with a Piſtol Ball. The repeated Attempts made in ſearching for the Bullets gave to Both great Pain; and brought on, in the Former, a Series of very untoward Symptoms. But that Sort of Treatment being

at length desisted from, and the Track of the Ball, which went under the Pectoral Muscle, laid open about three Inches, a Foundation was begun for a Cure, which was soon after effectually completed. Various were the Opinions of the foreign Surgeons concerning this Matter. Some pretended to an infallible Cure by Injections: Others, by applying a certain Machine, and thereby pressing the Part. But the last Determination prefer'd the Knife to all other Expedients whatever. After Bleeding twice in the Arm, the Wound heal'd: and the Ball remains behind, without the least disagreeable Sensation, or any Inconvenience in Nature: as the Bullet did likewise in regard of the

other

other Gentleman, whoſe Sore regularly heal'd; tho' not without Bleeding, and the Uſe of the Bark.

THE like Affair happen'd to a Captain of Dragoons, a Perſon of great Worth, who was ſhot in the upper Part of the Breaſt with a Musket Bullet, which lodged itſelf under the Scapula. The unſucceſsful Eſſay, in poking for the Ball, produced a Fever. But, by giving over Probing, and by reſtraining the feveriſh Symptoms, the Wound of courſe heal'd, and no more is to be heard of the Ball.

IN caſe the Wound be occaſion'd by a Musket or Piſtol Shot, and conſequently but ſmall, it will be alto-

gether neceſſary to dilate it without Delay. Yet, I think, in Wounds near a Joint, or in very Membranous or Tendinous Parts, the Knife, as well as Forceps, ſhould be put under ſome Reſtraint; nor any more Opening made, than what is abſolutely requiſite for the free Diſcharge of the Matter lodged within. Wounds in the Joints are always dangerous, let them proceed from whatever Cauſe, whether from a Bullet, or any cutting Inſtrument: and Membranous or Tendinous Parts muſt, paſt Diſpute, ſuffer from their being thus expoſed to the very ſenſible Impreſſions of the Air.

I COULD produce many Inſtances of Balls going thro' Muſcular Tex-

tures,

tures, and the Wounds being heal'd with very little Trouble. And I have known Wounds of the Scull, from a broad Sword, (where both Tables have been cut through, and a conſiderable Piece looſen'd) having been ſuffer'd to bleed for ſeveral Hours, to do well; nor to be attended, or at leaſt very ſeldom, with any feveriſh Complaint. Which I am apt to attribute to the great Quantity of Blood loſt immediately after the Parts had been injured.

A COLONEL of Dragoons received a Cut, from a broad Sword, on the fore Part of the Head, upon the Edge of the Hairy Scalp, about four Inches in Length. This Wound divided both Tables of the Scull, a

Piece

Piece of which, of about an Inch broad, and very near two Inches long, was quite looſen'd from the main Bone. He had two or three more Cuts on the Head, a Wound on one Side of the Belly, made by a Musket Ball, that went aſlant the lower Part of the Belly thro' the Abdominal Muſcles, and carried in a Piece of his Saſh along with it; and ſome more Cuts and Stabs in other Places of the Body.

THIS young Gentleman, early thus diſplaying undoubted Proofs of great Intrepidity, lay, under theſe Wounds, without any Chirurgical Help, till the next Day. He muſt, conſidering the Nature of his Wounds, and that he received the greateſt

Share

Share of them in the Heat of Action, indiſputably have loſt a conſiderable Quantity of Blood. Neither the leaſt Attack of a Fever, nor the Appearance of any bad Symptom, was, from firſt to laſt, any Interruption to the Cure: in the Courſe of which ſeveral Shivers of Bones were, from time to time, diſcharged from the Wound in the Head.

A LIEUTENANT of Horſe, poſſeſs'd of many engaging Qualities, received a Cut in the Head, juſt as his Horſe, which was ſhot, was falling. It had taken the Skin, Part of the Temporal Muſcle, and a Portion of the outer Table of the Scull, as big as a Crown-piece, quite off. He had beſides two very large Wounds on

the back Part of the Head, which laid the Bone bare. Theſe he received, as he lay upon the Ground; and was left on the Field of Battle for many Hours. Yet he recover'd, without any ſupervening Accident, in as ſhort a Time, as the Nature of the Caſe could poſſibly admit of. The immediate Loſs of a great Quantity of Blood, when the Hurt is firſt received, prevents, no doubt, the Symptoms, that would otherwiſe accrue, and paves the Way for theſe favourable Iſſues on ſuch Occaſions.*

If

* Tho' the two preceding Caſes do not, ſtrictly ſpeaking, belong to this Subject; yet I have inſerted them, out of a good Number: in order to point out the great Uſe of immediate Bleeding on ſuch like Accidents.

IF the Ball has gone quite thro', both Orifices are to be widen'd, (if in a Part, where it can be done with Safety) and particular Care is to be taken to preſerve both Openings; That eſpecially, which is the moſt depending. No Tents are to be made Uſe of, where there is any Poſſibility of avoiding them: and I would in general recommend light, eaſy, Dreſſings, with a ſlight, moderate, Bandage, juſt ſufficient to keep them on the Part. Thin Flannel is what I would prefer, in caſe it can be got.

WHERE the wounded Perſon has not ſuffer'd any great Loſs of Blood, it will be adviſeable to open a Vein

immediately, and take from the Arm a good large Quantity: and to repeat Bleeding, as Circumſtances may require, the ſecond, and even the third, Day. This timely Precaution will prevent a good deal of Pain and Inflammation, forward the Digeſtion, and contribute towards obviating a long Train of complicated Symptoms, that are wont otherwiſe to interrupt the Cure, miſerably harraſs the poor Patient, and too often endanger his Life. The following Inſtance, I think, in ſome meaſure demonſtrates the Neceſſity of Bleeding freely as ſoon as poſſible.

A YOUNG Gentleman, a Cornet of Dragoons, was wounded by a Musket

Musket Bullet juſt below the Knee, on the inſide. The Ball had made a great Laceration in the Skin, and laid the Membranes bare about four Inches in Length. I did not ſee him, till two Days after the Injury. He was then very feveriſh, quite parch'd up with Thirſt, and had a full Pulſe, with a great Pain, Swelling, and Inflammation all round the Joint. I order'd immediate Bleeding, a cooling Regimen, made Uſe of a Fomentation, dreſs'd the Wound with Digeſtive warm'd, and laid the Bread and Milk Pultice over the Whole; not omitting an emollient Clyſter, and an Opiate. The next Day his Pain rather increaſed: wherefore he was let Blood a ſecond, and after that, a third

Time. Six Days were now elapſed, when a *Miliary* Eruption ſeized him, with frequent Bleedings at the Noſe, and a *Diarrhœa*, which laſted about ten Days. Mean while, Matter was form'd in ſeveral Places about the Knee; which, on being let out, flow'd in prodigious Quantities. The Fever declining, the Bark was given him: but, as That, tho' join'd with an Opiate, ran thro' him, it was judged neceſſary to lay it aſide. Notwithſtanding he was now very weak and low, it was thought, in a Conſultation, that the only Chance, which remain'd of his ſurviving, was the Cutting off his Leg. The Operation was accordingly perform'd, but without Succeſs.——Upon examining the Knee, there

there appear'd ſeveral Cells, full of Matter communicating with the Joint; which had in many Places eroded the Cartilages of both the great Bones.

FOR the firſt twelve Days it will be proper to obſerve a cooling Regimen, both in reſpect of the Medicines, that may be preſcribed, and the Diet requiſite for the Support of Nature. And as, in Circumſtances of this Kind, 'tis neceſſary the Body ſhould by all means be open; a Stool ſhould be every Day procured either by Emollient Clyſters, or ſome gentle Laxative taken in at the Mouth.

WHATEVER Application is of a hot, ſpirituous, Nature, I find remarkably

markably injurious on theſe Occaſions; and what no wounded Part can in any Degree bear. Let the firſt Dreſſing be with Lint, dry, or moiſten'd with a little Oil, and a very light Bandage; the next with a Digeſtive warm'd, and over it the Bread and Milk Pultice, mix'd with a ſufficient Quantity of Oil to keep it moiſt: and, where there is great Tenſion, and the Wound large, a Fomentation. And this Courſe is to be continued, till the Sore is clean: and then it is to be heal'd according to Art. This Method will commonly promote a conſtant, eaſy, Perſpiration, abate the Pain, very much facilitate the Digeſtion, and remove all Apprehenſions of any approaching Inflammation.

mation. What induces me to moiſten the Lint with Oil, is the Eaſe, that is procured to a contuſed Wound from ſuch an Application, in compariſon of one of an abſorbent, drying, Diſpoſition: which, inſtead of giving free Liberty to the ſanious Blood to diſcharge itſelf, and conſequently preventing an Inflammation by unloading the Part, would poſſibly obſtruct the Mouths of the Capillary Veſſels, and hinder Nature from getting rid of that Incumbrance, which 'tis obſervable ſhe very much affects to throw off.

SHOULD an Inflammation ſeize any Part, thro' the Lodgment of a Bullet, or any other foreign Body, that

that could with Safety have been more immediately extracted; all Attempts of diſlodging ſuch extraneous Matter ſhould be poſtponed, till the Swelling has in ſome meaſure ſubſided, and the inflammatory Diſpoſition of the Fibres is nearly vaniſh'd: unleſs the Ball, or other extraneous Body, lies at no great Diſtance from the Orifice; and there is, on that Account, a Certainty of removing this Incumbrance without any material Trouble to the Patient.

If a Wound be of ſuch a deſperate Nature, as to require Amputation, (which is often the Caſe, when it happens in any principal Joint) it would certainly be of Conſequence, could the Opera-

tion be perform'd on the Spot, even in the Field of Battle: leſt by adjourning it an Inflammation, which one may very reaſonably expect, ſhould obſtruct a Work, that ought rarely to be enter'd upon during the Continuance of ſo calamitous a Circumſtance. The Neglecting this critical Juncture of taking off a Limb frequently reduces the Patient to ſo low a State, and ſubjects the Blood and Juices to ſuch an Alteration, as muſt unavoidably render the ſubſequent Operation, if not entirely unſucceſsful, at leaſt exceedingly dubious. And in Wounds, even where no Amputation is required, 'tis equally adviſeable not to defer the Care neceſſary to be taken of them: leſt, by the Parts being ex-

poſed to the Air, there might ariſe a Series of very dangerous Symptoms.

In order to make That practicable, which I here ſo ſtrenuouſly adviſe, I could wiſh to be indulged in offering a Scheme, which might, perhaps, be put in Execution with all the Facility imaginable. It is This. When the Army is forming for an Engagement, let the Surgeons, with their reſpective Mates, of the three or four Regiments, that are poſted next each other, collect themſelves into a Body, (the ſame Method being obſerved throughout the whole Line) and take their Station in the Rear, according to the Command of the General. Here let the

the Wounded be put under their immediate Care and Management: who by this means will be enabled mutually to aſſiſt each other, and to perform their Duty with all poſſible Exactneſs, and Diſpatch.

Now let any Perſon of common Humanity reflect on the Conſequences naturally flowing from this Manner of treating the Wounded on the Spot; and form a juſt Idea of poor Creatures being actually conveying, tho' with all conceivable Tenderneſs, from Place to Place, under the extreme Miſery of large, lacerated, Wounds, bleeding Arteries, or fractured Limbs; and this abrupt, prepoſterous, Removal attended with the moſt fatal Symp-

toms, of which there was not, perhaps, at firſt, the leaſt Appearance, or Apprehenſion: and I am apt to think he will not heſitate one Moment in preferring this my Scheme to that Scene of terrible Diſtreſs, which I look upon as one of the moſt moving, that can be preſented to the human Eye.

WOUNDS, that border on any conſiderable Artery, are very apt to bleed afreſh upon Motion, or the Return of a free Circulation of the Blood into the Part, which was interrupted at firſt by the Violence of the Injury offer'd it: and this is almoſt always the Caſe, when the Slough begins to ſeparate. For which Reaſon, one ſhould never attempt

attempt to remove it by Force; but wait with Patience, till there be a perfect Separation of this Slough: nor be in the leaſt wiſe ſhock'd at the Accident of Arteries thus opening themſelves, which a very moderate Experience will convince one to be almoſt inevitable. The Patient frequently gives Warning of what is coming upon him, by complaining of great Weight and Fulneſs in the Limb, which are ever accompanied with more or leſs Pulſation in it: an infallible Prognoſtic of the Conſequences. Let the Wound afflict whatſoever Part, if theſe Complaints attend it, I inſtantly injoin Bleeding, and the Bark.

I HAVE known ſeveral Inſtances of Perſons loſing their Lives from the ſtarting of an Artery, before the Surgeon could reach them; particularly, where there has preceded an Amputation. And I dare affirm, the Quantity of Blood loſt, eſpecially in the Caſe laſt mention'd, has not amounted to twelve Ounces: which I don't know how to account for otherwiſe, than by the Drain which had been made from the Maſs of Blood both before, and during the Operation. Whence a ſudden Guſh, tho' of ſo moderate a Portion of Blood, after the great Quantity already loſt, gives a Check to the Circulation, and cauſes immediate Death. This Reflection, I think, ought to be a

Leſſon

Leſſon of Inſtruction to every Practitioner to be particularly intent on the faithful Diſcharge of his Duty in regard of tying the Veſſels.

REPEATED Bleedings in the Beginning draw after them many Advantages. They generally prevent, and always leſſen, any feveriſh Aſſaults, and ſeldom fail to obviate Impoſtumations. The Body muſt ever be kept in a laxative State: and, when Pain puts it on the Rack, immediate Recourſe muſt be had to the ſovereign, and almoſt divine, Powers of *Opium*.

THE Method, I have preſcribed to myſelf in penning this ſmall Treatiſe, leads me in this Place to ſpeak of

of the Bark: a Medicine, which no Human Eloquence can deck with Panegyric, proportionable to its Virtues. Of ſuch incomparable Benefit it is to Mankind!

I HAVE for a long time indulged myſelf in the frequent Uſe of this noble Drug, in reſpect of large Sores of every Kind: and have often experienced, that, in thoſe painful Circumſtances, it would procure Reſt, if given in large Doſes, when even *Opium* had been taken without any manner of Effect.

THO' I am aware, that a very ingenious Surgeon recommends the Bark * againſt Hæmorrhages in external

* See *Phil. Tranſact.* N°. 426.

ternal Wounds in general; yet the preſcribing it in Gunſhot Wounds in the Manner I introduced it laſt Campaign, is a Practice, as I conceive, no where left us on Record. And This I did with extraordinary Succeſs: of which I ſhall give ſome few of the many Examples, that have occurr'd to me in Practice.

IN all large Wounds, eſpecially thoſe made by a Cannon Ball, there is conſtantly a great Laceration of the Membranes, and Parts endued with an exquiſite Senſation. And Theſe are ever attended with an excruciating Pain, and a Diſcharge of a gleety Matter; which, if not reſtrain'd, proves often of the laſt Conſequence. In this unhappy State,

the Bark (given in Doſes of a Drachm each, and repeated every three Hours; or oftener, if the Stomach will bear it) with ſurprizing Efficacy repairs the Breach made in the Conſtitution by this terrible Havock. *Elixir* of *Vitriol*, taken three times a Day, in a Glaſs of Water, I find to be of ſingular Benefit; and to prove a very good Aſſiſtant to the Virtues of the Bark. And, if the Body be coſtive, to each Doſe of the Bark I add four or five Grains of *Rhubarb*, till that Inconveniency is remedied. Should the Bark run off by more than four or five ſucceſſive Stools, I take care to check this Effect of it by ordering two or three Drops of *Laudanum*, or two Spoonfuls of the *Diaſcordium*

aſcordium Mixture along with it, every time it is given.

WHERE the Sore diſcharges a conſiderable Quantity of gleety Matter, is flabby, looks pale and gloſſy, (which Appearances are ever conſequent to a Loſs of Subſtance) the Bark continually relieves the Pain, that is predominant in this Caſe, thickens the Matter, leſſens its Quantity, and quite changes the Complexion of the Wound. And, tho' the Patient has a dry Tongue, great Heat, a quick, low, Pulſe, and a Head hardly clear; yet, even in this Situation, I have known it to do Miracles. Nor (I freely own, when the Neceſſity for it is evident from Symptoms) have I, in

adminiſtring it, the leaſt Attention to the Quickneſs of the Pulſe. And in Wounds, where, upon every Dreſſing, the Arteries have ſtarted, and, of courſe, ſubjected the Patient to no little Hazard, I have frequently remark'd the Bark to procure the moſt unaccountably good Effects.

HOWEVER, I would not be underſtood to inſinuate, that the Bark will ſtop the Bleeding of any conſiderable Artery. Nevertheleſs, tho' this efficacious Property is not to be expected from it, the vitiated Texture and State of the Blood (which, from too great a Degree of Fluidity, forces thus its Way thro' the Arterial Paſſages) will be alter'd more effectually from the Exhibition of it,

than from any Thing I know in the whole *Materia Medica.* From whence, I think, is plainly pointed out to us the Baſis, we are to erect our future Superſtructure upon. The Bark, on theſe Occaſions, I conſtantly adviſe, together with *Opiates*, more or leſs, in Proportion to the Urgency of the ſupervening Symptoms.

IN order to exemplify the Method laid down in the preceding Pages, I ſhall begin by giving a Detail of a very extraordinary Caſe, that center'd in the Perſon of a young Prince, no leſs diſtinguiſh'd for his Martial Proweſs, than high Birth. This illuſtrious Perſonage received a Wound from a Grape-

ſhot diſcharged from a Cannon, which went quite thro' the Calf of his Leg. It enter'd on the Outſide, cloſe to the *Fibula*; a little above where the *Gaſtrocnemius* Muſcle begins to grow Tendinous. Part of which, together with the common Membrane, that inveſts all the Muſcles of the Leg, appear'd jagged at the Mouth of the Wound: which was ſo exceedingly wide, that I believe its Orifice might have very well admitted a large Hen-Egg. The Shot made its Exit cloſe by the *Tibia*: nor were the Dimenſions of this Orifice a jot leſs conſiderable, than what I have been reciting of the other. It had drove the Extremities of ſome of the Muſcles, which it had tore aſunder

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in its Paſſage, quite out of the Wound: which, as no eſſential Artery was burſt, bled rather more, than what is uſual for this Sort of Wounds to do at firſt; eſpecially, as I had not omitted the neceſſary Precaution of taking away from the Arm, in the Field of Action, very little leſs than twenty Ounces of Blood. I applied a very eaſy, light, Dreſſing; and juſt ſupplied Bandage enough to keep it on the Part. That Night was not paſs'd without much Inquietude. Next Morning Things were ſo circumſtanced, that there was an unavoidable Neceſſity for removing him a conſiderable Diſtance from that Situation. Accordingly, he was convey'd in a Coach, under great Uneaſineſs (tho'

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through no Fault of the Vehicle) about fifteen *Engliſh* Miles to Quarters: which, tho' ſufficiently remote from any hoſtile Alarms, were, nevertheleſs, but very indifferently accommodated; and, conſequently, in no Degree ſuitable either to his high Quality, or the Circumſtances his early Valour had laid him under. Some few Hours after the Fatigue of the Journey, I repeated the Bleeding, and gave Directions for an emollient Clyſter: ordering at the ſame time ſome *Gaſcoign*'s Powder to be taken every four Hours, with a proportionable Addition of *Nitre*. The Nature of the Wound conſider'd, the Quiet he enjoy'd that Night far exceeded my Expectations. The next Evening

Evening, notwithſtanding, I bled him for the third Time, and repeated the Clyſter. To the Sores I applied warm Digeſtive, and wrapp'd the whole Limb in a Bread and Milk Pultice, in which was juſt Oil enough to prevent its growing dry. A bloody Ichor, which is a conſtant Forerunner of Matter, and ever, in the Beginning, carries with it a good Prognoſtic, made now a plentiful Diſcharge. The Swelling was not very great, and the Inflammation but little. Care was taken to keep the Body open, and the Courſe of the cooling Powders continued to the fifth Day. He had now ſome Complaints of a little Heat: but, as thoſe were very tranſient, and he afterwards tolera-

bly eaſy, they were not much attended to. I think this Day, the King's Phyſician, Dr. *Werlhoff*, made him the firſt Viſit. It was judged proper to keep in the Road of the cooling Regimen preſcribed, both as to his Medicines, and Diet. The Wound now began to make a good, and regular, Diſcharge of Matter: no ways exceeding in Quantity what is expected from Sores of that Nature. There was no Abſceſs, no Lodgment of Matter, nor any extraneous Body, from the Beginning to the End, to obſtruct our Endeavours; tho' the Swelling was rather ſomewhat increaſed, as was likewiſe the Diſcharge, on the eighth Day. Towards Noon he complain'd of be-

ing chilly; and was ſoon after attack'd with a ſevere Shivering: which continued haraſſing him for the Space of four or five Hours. Then ſucceeded a Heat, which did not in the leaſt abate the greateſt Part of the Night. Towards the Return of Morning he began to fall into a Sweat, that ſoon became profuſe. We attended very early, and agreed to give him better than a Drachm of the Bark in a Doſe every two Hours. But, as This gave him ſeveral Stools in a ſhort Time, we added to every Doſe three Drops of *Laudanum*, till that Effect of it was prevented. I muſt remark, that the Sweat had been on him, when the Bark was firſt preſcribed, about three Hours.

When the Sweat, which continued about twelve Hours, was entirely off, he took *Elixir* of *Vitriol* twice or thrice a Day. From this Period, there was an Abatement both of the Swelling, and of the Diſcharge: nor had we the leaſt Return of any feveriſh Appearances. On the twelfth Day a Slough came away in one intire Piece, without either Force or Pain, near the whole Length of the *Tendo Achillis*. The Bark we thought proper to continue for ſome Time. The Wound, indeed, heal'd but ſlowly: which I conceive to be altogether owing to his being conſtantly on his Legs, and ſcarce ever without his Boots on. There is no great matter of Stiffneſs now remaining in the Limb: even

even not ſo much as one would naturally ſuppoſe muſt be neceſſarily conſequent to a Wound among a Cluſter of Muſcles; where the Fibres, that ought to be looſe and free, are too much confined and reſtrain'd by the Means unavoidably made Uſe of to effect the Cure.

I HAVE been a little more circumſtantial in my Relation of this Caſe, than, perhaps, was abſolutely requiſite. But, as the Behaviour of my Princely Patient on that Day was carried to the higheſt Pitch of Heroiſm; all the World, animated with any Degree of Virtue, or Honour, were attentive to the Event, and became deeply intereſted in his Recovery: an Event, which I eſteem

eſteem the happieſt of my Life. And the more ſo, as a Confidence, even to an Exceſs, was repoſed on the little Abilities I am Maſter of: which, indeed, were employ'd with unwearied Diligence, not only through a Motive of Duty, but of Inclination, ariſing from an inviolable Attachment to his great, and engaging, Qualities.— I muſt obſerve, that the Succeſs I met with in the foregoing Caſe was, no doubt, to be attributed to the plentiful Bleeding in the Beginning, and the free Uſe of the Bark. But, to proceed in my Narrative.

A GENERAL Officer in our own Army (whoſe ſingular good Properties in domeſtic Life are not leſs con-

conſpicuous, than his great Talents in Military Affairs) received a Shot from a Musket, that went obliquely quite thro' the *Os Calcis*. The Orifice, where the Ball enter'd, had been dilated before I ſaw him, which was not till the third Day from the Accident. I obſerved the Part, which is very Membranous, to be terribly lacerated, the lacerated Membranes to hang out at both Orifices, and the Bone itſelf ſhiver'd. The whole Foot, on which he ſtood for two entire Hours after the Shot had pierced it, was much ſwollen, tho' without any great Degree of Inflammation, or Pain. I took from the Wound ſeveral ſmall Pieces of Bone, applied warm Digeſtive, and laid the Bread and Milk

Milk Pultice over the Whole; did not omit Bleeding, and injoin'd the cooling Regimen: which Method was purſued for two or three Days; when the Diſcharge, Inflammation, and Pain increaſed, with a quick Pulſe, and a general Uneaſineſs. Theſe Appearances determined me to repeat the Bleeding, and to adminiſter the Bark: the Benefits from which were ſoon very evident, by an Abatement of the Heat, and a Leſſening of the Diſcharge. A very inconſiderable Portion of Matter now ouzed from the more depending Orifice. It almoſt all came out of the upper Mouth of the Wound. There was Nothing I ſo much wiſh'd the Accompliſhment of, as to have theſe two Orifices laid

laid into one. But as the Ball, the whole Length of its Paſſage, had form'd a Bony Arch, of no ſmall Thickneſs, and the Texture of the Part beſides was very Membranous; I deſiſted from the Attempt for the preſent: contenting myſelf with the Hopes, that the Matter would very ſoon find its Way to the lower Orifice. Things thus circumſtanced, I put a Sindon thro' the Wound, of a very fine Piece of Holland Cloth, moiſten'd in Digeſtive, which with great Eaſe I changed every Dreſſing: and perſiſted in this Method for ſeven or eight Days, till the Matter, not much in Quantity, was determined to the Opening below. When This was effected, I laid the Sindon aſide. The Cure henceforward

ward was no ways retarded by any Manner of Lodgment; which, indeed, before was very inconſiderable. Numberleſs ſmall Shivers of Bone were conſtantly brought out with the Sindon; which, at the ſame Time, put the Matter on making its Exit along with it at the inferior Orifice. Not long after, I diſcontinued the Application of the Pultice, and deſiſted from the Uſe of the Bark: but, Pain increaſing, I found myſelf under a Neceſſity of recurring to Both again; which I did on the next Dreſſing, and conſequently that Evening. For I never fail'd, particularly as it was very hot and ſultry, to dreſs Wounds of this Sort twice a Day. Upon our Decampment from this Place,

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my Attendance on this Gentleman was of courſe interrupted for four or five Days: after which Time he follow'd the Army by Water. The Fatigue, he underwent by this Removal, brought on a ſlight Inflammation, augmented the Pain, and increaſed the Diſcharge of Matter. I then determined with my ſelf, as ſoon as theſe Symptoms ſhould ceaſe, and the preſent Ruffle be a little over, to lay both Orifices into one. This accordingly I did, ſtill continuing the Uſe both of the Bark, and Pultice. Every Thing appear'd now with a good Aſpect. But, as the Seaſon of the Year began to advance, and there was no Poſſibility of his accompanying the Army with any tolerable Conveni-

ency, or without prejudicing his Health, I adviſed him to repair to *England*: which Counſel, tho' not without ſome Reluctance, he ſhortly after put in Execution. I had, indeed, before that, exhorted him to the ſame Purpoſe, being convinced this Misfortune would infallibly prove a Caſe of a tedious Nature. He has been in *England* now ſeveral Months; and, tho' the Wound is not, as yet, entirely heal'd, there is nevertheleſs all the Appearance in the World, that it will be ſo. He went on in the Courſe of the Bark till his Arrival in *London*, and for ſome Months after: nor did he ever return to the Uſe of it, when it had been at any time intermitted, without

without finding himſelf relieved by its ſingular Virtues.

THE next Inſtance I ſhall bring, of the great Efficacy of the Bark, will be That of a Major of Horſe, whoſe Foot was ſhot off by a Cannon Ball, except juſt where it hung, ſuſpended only by a Piece of Skin. The firſt Surgeon he met with cut that Skin aſunder, and applied his Dreſſings: but, upon Motion, and the Return of a free Circulation, the Limb bled a-freſh. The Surgeon of the Troop, in attending him, propoſed taking off the remaining Part of the Leg; which Advice was immediately complied with. But, I don't know by what Means,

a large Portion of the Muſcles, robb'd of the Skin, was left naked; which, on the leaſt Motion imaginable, or accidental Touch, even of the ſofteſt Subſtance, cauſed a moſt exquiſite Pain. And, if I remember right, the great Artery was the only Veſſel, that was regularly tied. Round the raw Stump was roll'd a Fillet more than ordinarily tight. Such was the Method of Dreſſing made Uſe of on that Occaſion. This brave, tho' unfortunate, Officer, lay the reſt of the Day, and all the ſubſequent Night, in a Waggon, which had ſcarce any Covering, miſerably expoſed to the Inclemency of the Rain, that pour'd from the Heavens in continual Floods. The

next Day, after Dinner, he applied for my Aſſiſtance. On my attending him, he complain'd of great Pain in the Stump, and a Pulſation in it, that was utterly intolerable. I immediately ſet about Opening it, removed that circular Band, which, from its Tightneſs, had render'd thoſe naked Muſcles very full and turgid, and brought on a conſiderable Swelling above the Knee. Upon removing this Band, the Blood ruſh'd out from ſeveral Arteries, and particularly from one that was very important. When, after a great deal of Anguiſh to the Patient, and no ſmall Trouble and Perplexity to myſelf, I had fortunately tied the Veſſels, I applied a very light and ſoft Dreſſing; and

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over all a Flannel Cap, (which I would ever recommend) with no more Rolling, than what juſt aſſiſted in keeping on the Dreſſing. I directed beſides a Courſe of *Teſtaceous* Powders with ſome *Nitre*, and order'd ſome Drops of *Laudanum* to be taken occaſionally, as the Neceſſity might offer itſelf of procuring Sleep. In ſpite of all my Circumſpection and Management, no Reſt that Night, nor the ſucceeding Day and Night, afforded him any Relief. His Pulſe was very quick and low, his Tongue dry, and he was ſomewhat inclined to a *Delirium:* the Stump diſcovering a great Tendency to bleed. This was his Situation, when I gave him the Bark: every Doſe almoſt of which,

which, as his Body was apt to be coſtive, I accompanied with a few Grains of *Rhubarb*. He alſo took thrice a Day twenty Drops of *Elixir of Vitriol* in a Glaſs of Water. This Regulation he was under both before, and ſome Months after, his Return to *England*. He is poſſeſſed at preſent of a tolerably good Share of Health: but, thro' the Shortneſs and Tenderneſs of the Stump, and its being very much ſubjected to crack, he but ſeldom, as yet, can enjoy the Uſe of his Wooden Leg. I can venture to affirm, that he took at leaſt five Pounds of the Bark. The little Omiſſions hinted at in the above Relation might probably be owing

to the almoſt continual Alarms from *Huſſars*, during the Operation.

THIS leads me to mention What I have often remark'd to be the Caſe in amputated Limbs, eſpecially in the Leg and Thigh: where the Habit of Body has been previouſly bad, or elſe made ſo, by deferring the Operation. And it is very common, in Scorbutic Conſtitutions, for a Sore, the firſt eight or ten Days after taking off the Limb, to promiſe all imaginable Succeſs: from which time it frequently begins to gleet prodigiouſly, looks pale, gloſſy, and flabby; and, this Gleeting, if not check'd, in a little while runs the Patient out of the World. In Exigencies of this Kind

the Bark hardly ever fails to procure Relief; and works an apparent Change in a very ſhort Space of Time: ſometimes in twelve Hours. This I can atteſt for abſolute Truth, in regard of a very worthy Gentleman about fifty Miles from *London*, who broke his Leg by a Fall from his Horſe. I took it off the ſecond Day from the Accident, and, after the firſt Dreſſing, reſign'd him to the Care of his neighbouring Surgeons: not in the leaſt afterwards ſuſpecting, but that every Thing was ſucceeding agreeably to our Wiſhes. But the Scene was quite reverſed. For, about ſixteen Days after, I received a Letter from the Gentlemen, who had the Management of him, intimating,

that a ſmall Artery near the Skin bled very freely, on their removing the Dreſſings. In Anſwer, I adviſed a Vein to be open'd in the Arm, and the Bark to be taken inſtantly. But, as the Symptom of the Arterial Opening ceaſed, and the Patient was without any Sign of a Fever, the Advice of ſeeking Reſource, from the Bark was poſtponed. The ſeven and twentieth Day, another Surgeon, Eminent in the Profeſſion, and myſelf were hurried out o' Town to his Aſſiſtance. On our Arrival, we found him very much emaciated, a great Gleet inceſſantly ouzing from the Stump: which, on the Removal of the Dreſſings, bled from every Pore, like Water preſs'd from a Spunge:

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We immediately gave him the Bark, and repeated it every two Hours. The next Morning, the Diſcharge was conſiderably leſſen'd, nor did there appear the leaſt Foot-ſteps of Bleeding. If he accidentally at any Time neglected taking it, only for a Day, or even leſſen'd the Doſes, the Wound inevitably pointed out the Omiſſion by the Alteration of its Complexion. He perſiſted in the Method of taking the Bark every two or three Hours, till he came to Town: when it was thought proper to give him a larger Reſpite. He now enjoys a perfect State of Health, and has done ſo, ever ſince the Stump was heal'd. But, e'er This was accompliſh'd, he took near nine Pounds of the Bark.

In the Caſe, I ſhall next recount, the Reader will very readily perceive the Inconveniencies and Obſtructions of Cure, that ſucceeded a ſtrong Antipathy to the Bark.

A Captain of a Troop of Horſe, a Gentleman deſervedly eſteem'd, happening to be ſo far advanced, that all Poſſibility of avoiding to engage with the Enemy was entirely cut off, fought his Way ſingly thro' many Squadrons of *French*. In his Retreat from this deſperate Conflict, a Piſtol Ball took him in the Back, enter'd juſt by the lower Edge of the *Scapula*, (a ſmall Portion of which it broke off) and made its Exit juſt below the ſhort

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Ribs on the oppoſite Side. I have often wonder'd, how the Bullet could paſs over the *Vertebræ* of the Back without hurting them: which, in the Subject before us, it indiſputably did. Bleeding and the cooling Regimen were preſcribed him: nor was there wanting a proper Dilatation of the Wound. Every Thing was now in ſo good a Poſture, that he walk'd abroad ſeveral times: tho', I muſt confeſs, not altogether with my Conſent. One of the Orifices heal'd in a ſhort Space of Time: and ſo, indeed, ſeem'd the other diſpoſed to do, had the Cloſing of it been judged conſiſtent with the Patient's Safety. But, ſome very indifferent Symptoms ariſing, it was adviſable by all means

means to keep it open. For on the twelfth Day, he grew very feverish, and spit a little Blood: which determined me to bleed him freely, and to continue the cooling Course of Medicines; to which I would willingly have join'd the Bark: but he absolutely refused to listen to that Proposal. The next Day, I found him not at all better; so repeated the Bleeding. That Evening, notwithstanding, he discharged a great Quantity of Blood, both from his Stomach, and Lungs: whereupon I open'd a Vein for the third time. He still continued to turn a deaf Ear to all I could say in Recommendation of the Bark. However, at length, he was induced to take some Extract of

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it; which immediately wrought an apparent Amendment in him. But his Averſion to this Drug was of ſuch an obſtinate Nature, that he ſoon deſiſted from the Uſe of it, even in this Form. The Veſſels perſiſting to open themſelves, and the Blood frequently to ruſh out, I was forced to recur ſo often to the Expedient of the Lancet, that I really grew weary of keeping an Account of my Operations on thoſe emergent Occaſions. Theſe Evacuations neceſſarily reduced him to a very low Ebb: and yet his Antipathy to the Bark remain'd in him as inveterate as ever. 'Twas from the Conſideration of theſe Incidents, that I was reſolved to keep the Wound open; which was not ef-

fected without ſome Difficulty. In this uncertain State I was obliged to leave him: but, as the Bleeding often return'd, there was as often a Neceſſity of taking away Blood. About a Month after, he came to me at *Mentz*, in ſuch a debilitated Condition, that I could ſcarce ever hope to ſee him more. From thence he immediately ſet forward for *England*; where, on his Arrival, he put himſelf under the Care of a Phyſician, and Surgeon, (Both eminently diſtinguiſh'd in their reſpective Profeſſions) who were altogether at a Loſs how to account for the extraordinary Circumſtances of his Caſe. However, the Symptoms frequently returning, the Lancet was

was as often made Uſe of. At length he was prevail'd upon to take the Bark, with Opiates: which abated the Bleeding, tho' they did not entirely prevent it. As his Phyſician had obſerved, notwithſtanding the Blood taken from the Arm, that the Veſſels for the moſt part made a freer Diſcharge than before that Operation; and, conſequently, that he was under a Neceſſity of making farther Evacuations by Bleeding, he was determined to open a Vein in the Foot: which, upon repeating, and accompanying the Bark with the *Royal Styptic*, thoſe Symptoms in a moderate Space of Time entirely left him. It is very juſt I ſhould, on this Occaſion, communicate to

the Reader a Remark, which the ſame Phyſician, in his extenſive Practice, has frequently made in reſpect of Hæmorrhages iſſuing either from the Noſe or Lungs: *viz.* that Bleeding in the Foot has proved of great Efficacy towards ſtopping thoſe Diſcharges, when taking Blood from the Arm has not in the leaſt afforded any manner of Check to them. But to return. From that time the Patient began to get the better of his Diſorders: and at preſent, tho' far from being re-eſtabliſh'd in his former Health and Strength, yet, he enjoys a greater Portion of Both, than I once could imagine would have ever come to his Share. Theſe Gentlemen attempted, as I had done, to keep the Wound running;

ning; but That, they perceived, was attended with no little Difficulty: and, therefore, they laid aſide all Thoughts of ſtriving to accompliſh that Expedient, and left the Sore thenceforward at full Liberty to heal.

IT has ever ſeem'd very myſterious to me, from what Cauſe this Series of ſurprizing Symptoms could ſpring. Had there been but one Orifice, 'twould then have been evident, that they would have been owing to the Ball's remaining in the Body. Indeed, as Piſtols are generally charged with a Brace of Balls, 'tis poſſible, they might have both enter'd at the ſame Orifice; one finding its Way out

again, the other lodging in the Cavity of the Breaſt: tho' This, I think, is highly improbable.

In the following Caſe, it will be ſubmitted to the Reader to draw from it what Concluſions he pleaſes, in reſpect of the Uſe of the Bark. An *Auſtrian* Officer, who had his Hand miſerably ſhatter'd by a Cannon-Ball, was, by ſome Accident, left in a Wood near the Field of Battle, deſtitute of any Manner of Help, from *Thurſday* (the Day of Action) till the *Sunday* following; when he was brought to *Hanau*. The next Morning, I was carried to ſee him, and to aſſiſt in taking off his Arm. On viewing it, I found it mortified almoſt

moſt to the Elbow, with a great Swelling and Inflammation quite up to the Shoulder. As it was by no means adviſable to attempt an Amputation in ſuch Circumſtances, I propoſed giving him the Bark: which, being no ways objected to, he enter'd upon immediately. The next Day, he was rather better: but, on the third, was evidently ſo. The Inflammation was leſs, the Swelling began to ſubſide, and the Edges of the Mortification were ſeparating. This Succeſs, from the Bark, was Matter of great Surprize to the Surgeons, who attended him: the Practice of adminiſtring it on theſe Occaſions being altogether new to them, and unprecedented. As to the Phyſician,

he

he was not unapprized of its Uſe in Mortifications. The Arm was fomented and wrapp'd up in the Oatmeal and Stale-Beer Pultice with *Theriaca :* and the dreadful Symptoms, that forbad the Operation, were now ſo much abated, that his Surgeons did not at all heſitate to take it off. But This was done to very little Purpoſe ; for three or four Days after the Amputation (his Jaw being fix'd by a Convulſive Attack, and his Countenance greatly diſtorted) he expired.

I HAVE ſeen two more Inſtances of Perſons being ſeized with this Sort of Convulſion, who both died. And (What adds to the melancholy Circum-

Circumſtances) tho' they labour'd under an Impotency of Speech, yet their Senſes were no ways impair'd. I believe this Convulſive Incident to be no very uncommon Symptom in Gunſhot Wounds; nor indeed in any other, where there is a conſiderable Laceration of Parts, thick interwoven with Membranes.

NOW, tho' I have the higheſt Ideas imaginable of the Virtues of the Bark on Occaſions, ſimilar to thoſe I have been delineating; yet, I conceive it but equitable to exhibit likewiſe an Inſtance or two in my Practice, where it was not attended with its accuſtomed Succeſs. The preceding Caſe may, perhaps, be

thought to leave the Matter doubtful as to any Benefit conferr'd by it: and from What I ſhall next relate 'twill be very certain, that the Taking of it produced no Advantage whatever. A proper Judgment, in theſe Matters, is ever to be form'd by comparing Events; and weighing, with the greateſt Exactneſs, the good Effects, againſt thoſe, that have been of a contrary Nature. By this Means we ſhall be enabled, like judicious Pilots, to ſhape our Courſe aright; nor touch upon a Sand a ſecond time, that had once endanger'd the Veſſel. Whatever favourable Conceptions the Reader may entertain of the Bark, from the foregoing Relations, they muſt reſult from the artleſs Re-

cital of real Matter of Fact; not be ſuggeſted to him thro' the inſinuating Powers of florid Diction, or prevailing Elegance of Stile. I have no Pretenſions to Purity of Language: nor, indeed, have I the Leiſure to dreſs up my Pages in the ſhining Ornaments of ſtudied Elocution. But to the Buſineſs in hand.

A GENERAL of the *Hanoverian* Forces, an Officer of eſtabliſh'd Merit, of about ſeventy Years of Age, had his Ancle, with the neighbouring Parts, all terribly ſhatter'd by a Cannon-Bullet, and lay under the Management of his own Surgeon. My Aſſiſtance was applied for, the third Evening after

the Accident. On taking a Survey of the Wound, I judged it a Caſe, that plainly indicated an immediate Amputation. Accordingly, at the Sollicitations of the Gentleman, who attended him, I inſtantly cut off the Leg. That Night he reſted tolerably well: and, on the next Dreſſing, every Thing ſeem'd to carry ſo good a Face, that I began now, notwithſtanding his advanced Age, and the Circumſtances of the Operation's not being perform'd ſooner, to indulge ſome Hopes of a favourable Iſſue in the Affair. The King's Phyſician likewiſe paid him regular Viſits. My Rule was to ſee him every third or fourth Dreſſing. But, as he was, about the ſixteenth Day, attack'd by a *Diar-*

rhœa,

rhœa, (which is no Obſtruction to the Exhibition of the Bark, provided each Doſe be accompanied with three or four Drops of *Laudanum*) I was requeſted to give my Attendance at that Morning's Dreſſing. I muſt own, the unexpected Alteration, I found wrought in him, perfectly ſurprized me. The Stump look'd pale, and the Fleſh was beginning to quit the Ends of the Bone: which Symptom, even in Youth, affords but a very indifferent Prognoſtic, and, in old Age, I believe, ſeldom fails to prove fatal. However, we dreſs'd the Sore with Pledgets of Digeſtive, being firſt dipp'd in *Oil* of *Turpentine* warm, and agreed to his taking the Bark. From this time he grew worſe

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and worſe, till he breath'd his laſt. I ſhall not interrupt the Reader in making what Reflections he pleaſes on this exact Narrative. But I muſt not omit to do Juſtice to the Doctor, by declaring, that the Bark could not ſtand in any one's Opinion in higher Eſteem, than in his.

As my Deſign in ſetting out was not to make any conſiderable Excurſion, I now haſten to put a Period to this plain, practical, Diſcourſe. What I have therein recounted, I am apt to think, will contribute, in ſome meaſure, towards lightening the Surgeon's Cheſt, and baniſhing from the Republick of Surgery the extravagant Uſe of Probes, Forceps, Mallets and Chiſſels,

Chiſſels, with various other Inſtruments: which are not only extremely painful to the Patient, but likewiſe expoſe his Liſe to great Hazard; and are moreover, in my Opinion, far from doing any Honour to Thoſe, who uſe them. Nature's being contented with a Little, is an Axiom, that not only reſpects the Retrenching of Superfluities in regard of the real Exigencies of Life; but may alſo be extended to the Management, which theſe Kinds of Wounds, generally ſpeaking, only ſtand in Need of.

To put this Matter in as clear a Light as poſſible, we will ſuppoſe a Ball to be lodged in any Part,

Part, beyond the Reach of the Finger; entirely out of the Way of being mark'd by the external Touch. Now it will appear evident, upon the leaſt Reflection, that the Thruſting, firſt, that long Probe, in Queſt of the Bullet, then, thoſe longer Forceps, either with or without Teeth, into a Wound of that Kind, tho' with a Sort of Certainty to extract it, muſt either contuſe, or irritate and inflame, the Parts to a great degree: and, conſequently, do as much, and perchance more Miſchief, than the Ball did at firſt by forcing its Paſſage ſuch a Length of Way. And ſhould they at the ſame time lay hold of any Nerve, Artery, or even common Membrane of

of a Muſcle, together with the Ball, (which I think muſt ſcarce ever fail of being the Caſe) what ſhocking Conſequences would attend ſuch a Proceeding! Nor would Attempts of this Sort be leſs injurious, in caſe a Bullet ſhould happen to be lodged in the Cavity of the Belly, or Breaſt: whereas Lead, 'tis well known, will lie a long time in ſeveral Parts of the Body, without any material Hurt, or even Inconveniency.

As to Chiſſels, I am quite of Opinion, they ought upon no Occaſion to be made Uſe of; inaſmuch as they too frequently ſplit the Bone up to the next Joint, or ſhiver it in ſuch ſort, that, inſtead

of promoting a Cure, by removing the Part affected, they generally bring on Symptoms worſe than the Diſorders, they were intended to remedy. A good Knife, without diſpute, is all that is neceſſary to the Taking off a Finger: or ſhould one of the Bones of the *Metacarpus* require Amputation, a ſmall Spring-Saw does the Work with great Eaſe and Safety.

THE Reader will eaſily recollect, that where-ever, in the foregoing Relations, I have made Mention of Dreſſings, they were from the firſt of a ſoft, eaſy, ſupple Nature, ſuch as Lint moiſten'd with Oil, or, I might have added, Pledgets of Digeſtive; and the Bandage light:

hot,

hot, dry, and ſpirituous Applications being what I never found to anſwer the expected Succeſs, but, on the contrary, productive frequently of great Inconveniencies. And, I confeſs, the Hopes I had of familiarizing theſe to the young Practitioner, was one main Motive, for my thus launching at once into the Publick, intirely unconcern'd for the Plainneſs of the Dreſs, with which my Thoughts are cloath'd.

As to the Bark, the Inſtances, I have brought in Support of the Efficacy, I have ever and anon aſcribed to that favourite Medicine, I think, evidently demonſtrate its ſpecific Properties, on the Invaſion of thoſe Symptoms, I have frequently

quently recapitulated in the Thread of my Diſcourſe. And I flatter myſelf, that, for the Future, this powerful Production of *Peru* will in ſuch Caſes be held in proper Eſteem by every Perſon, diveſted of Partiality and Prejudices, into whoſe Hands this well-intended Sketch of mine may happen to fall. In a Word, I ſolemnly proteſt (What I promiſed in my introductory Part of this ſmall Eſſay) that I have given an Hiſtorical Account of no Chirurgical Proceſs, but what is, in every reſpect, and Circumſtance, according to the beſt of my Remembrance, exactly conformable to Truth.

The E N D.